Architectural Engineering Design: A Real-Life Example

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Abstract

This paper describes the various steps accomplished to implement the design and construction of an additional bathroom with an existing building in Atlanta, Georgia, USA. The process of developing floor plans, getting approvals from the city, hiring contractor(s), stepwise building, and getting inspections done by the city authorities at various stages of the building process, has been outlined in detail. This sequence of steps can serve as a good case study for architectural engineering students and can provide useful materials for faculty members teaching such courses.

Keywords
Architectural Engineering, Engineering Design.

Biography

Dr. Anjum Ali completed his Ph.D. degree in August 1988 from the University of Alabama, Huntsville, Alabama, U.S.A. He has been teaching Electrical and Computer Engineering subjects since March 1978. His first teaching appointment, as a lecturer of Electrical Engineering, was at the University of Engineering and Technology (UET), Lahore, Pakistan, after winning gold medals in each of the last three years of his undergraduate engineering education. His teaching experience includes twelve years at Mercer University, Macon, Georgia, USA, and about nine years at three different universities in Saudi Arabia. As a tenured ECE faculty member at Mercer University (1988-1999), he developed and taught a number of computer engineering courses, starting from the first undergraduate course in the area to various advanced MS level electives.

He has also worked, as an associate professor, at the Lahore University of Management Sciences (LUMS), Lahore, Pakistan, from 1996 to 1998 (on leave from Mercer University). During his stay at LUMS, he developed the computer engineering portion of the CS curriculum, and helped the university transition from the quarter system to the semester system.

He served as the chairman of the Electronics Engineering and Instrumentation Department at the Hail Community College (now University of Hail), Hail, Saudi Arabia, from February 2000 to June 2002. During his stay there, he developed a four-year degree program in Electrical Engineering for the University of Hail.
Dr. Anjum Ali moved to Pakistan in July 2002, and joined Al-Khawarizmi Institute of Computer Science (KICS) at the University of Engineering and Technology, Lahore, as a professor in December 2002. During his stay at KICS, he initiated many research and development projects and won research grants. He also developed teaching materials related to courses in computer architecture for the Virtual University of Pakistan.
He has been a professor of Electrical Engineering at the National University of Computer and Emerging Sciences, (FAST-NU), Lahore, from May 2005 to May 2018. He was the Head of Electrical Engineering from March 2007 to September 2013, and during this time he developed multiple long-range policies and procedures for the university, which are still in place. He was also the Acting Director, Lahore Campus, at different occasions during his stay at FAST-NU, Lahore.
Dr. Anjum Ali served as the convener of the National HEC Computer Engineering curriculum development committee. The HEC committee (NCRC) developed and finalized the 2009 HEC Computer Engineering Curriculum for all Pakistani universities.

Dr. Anjum Ali has taught many EE, CE and CS courses and supervised numerous graduate as well as undergraduate students during his 40 years of teaching career. He has over 30 conference and journal publications. He is also the founding editor of the FAST-NU Research Journal. His areas of current research interest include embedded control systems and computer architecture.